

IN THE CLAIMS:

1. (Currently Amended) A seat belt device comprising:
a seat belt for constraining an occupant to a seat;
a-tension varying means allowing constructed and arranged for applying a tension given to the seat belt to vary, wherein the tension varying means is provided at a first part supporting the seat belt or a second part supporting the seat belt;
a-tension detecting means for detecting a an actual tension of on the seat belt, wherein the tension detecting means is provided at the first part supporting the seat belt or the second part supporting the seat belt; and
failure detecting means for comparing the tension given applied by the tension varying means to the actual tension detected by the tension detecting means, to detect failures of at least one of the tension varying means and the tension detecting means when a difference between the tension applied by the tension varying means and the actual tension measured by the tension detecting means is greater than a predetermined value, wherein the predetermined value is selected as a value larger than a tension loss from the tension varying means to the tension detecting means.
2. (Currently Amended) The seat belt device according to claim 1,
wherein the seat belt is of a three-point support-type belt, one end thereof of the belt being supported at an electromotive retractor in such a manner as to be freely wound, the an other end thereof of the belt being supported at a lap anchor part, and the a midportion thereof of the belt being supported at a buckle stay part,
the tension varying means is provided at the electromotive retractor, and
the tension detecting means is provided at the lap anchor part.
3. (Currently Amended) The seat belt device according to claim 1,
wherein the seat belt is of a three-point support belt type, one end thereof of the

belt being supported at an electromotive retractor in such a manner as to be freely wound, the other end of the belt thereof being supported at a lap anchor part, and the a midportion of the belt thereof being supported at a buckle stay part,

~~the tension varying means and the tension detecting means are arranged such that~~ the tension varying means is provided at the retractor and the tension detecting means is provided at the buckle stay part, ~~such that~~ or the tension varying means is provided at the buckle stay part and the tension detecting means is provided at the lap anchor part, ~~or such that~~ the tension varying means and the tension detecting means are provided at the buckle stay part,

the buckle stay part is provided with an attachment/detachment detecting means for detecting an attachment of the seat belt, and

the failure detecting means is ~~allowed to be~~ actuated when the attachment/detachment detecting means is detecting the attachment of the seat belt.

4. (New) The seat belt device according to claim 1, the failure detecting means comprising an output connected to a warning lamp, wherein the warning lamp is lit when an error in the tension varying means or tension detecting means is detected.

5. (New) The seat belt device according to claim 1, the failure detecting means comprising an output connected to an airbag control.

6. (New) A seat belt device comprising:
a three point seat belt for constraining an occupant to a seat, one end of the belt being supported at an electromotive retractor in such a manner as to be freely wound, other end of the belt being supported at a lap anchor part, and a midportion of the belt being supported at a buckle stay part;

tension varying means constructed and arranged for applying a tension to the seat belt, wherein the tension varying means is provided at the electromotive retractor;

tension detecting means for detecting a an actual tension on the seat belt, the tension detecting means is provided at the lap anchor part; and

failure detecting means for comparing the tension applied by the tension varying means to the actual tension detected by the tension detecting means, to detect failures of at least one of the tension varying means and the tension detecting means when a difference between the tension applied by the tension varying means and the actual tension measured by the tension detecting means is greater than a predetermined value, wherein the predetermined value is selected as a value larger than a tension loss from the tension varying means to the tension detecting means.

7. (New) A seat belt device comprising:

a three point seat belt for constraining an occupant to a seat, one end of the belt being supported at an electromotive retractor in such a manner as to be freely wound, other end of the belt being supported at a lap anchor part, and a midportion of the belt being supported at a buckle stay part;

tension varying means constructed and arranged for applying a tension to the seat belt;

tension detecting means for detecting a an actual tension on the seat belt;

an attachment/detachment detecting means for detecting an attachment of the seat belt, which is provided at the buckle stay part;

failure detecting means for comparing the tension applied by the tension varying means to the actual tension detected by the tension detecting means, to detect failures of at least one of the tension varying means and the tension detecting means when a difference between the tension applied by the tension varying means and the actual tension measured by the tension detecting means is greater than a predetermined value, wherein the predetermined value is selected as a value larger than a tension loss from the tension varying means to the tension detecting means, and wherein the failure detecting means is actuated when the attachment/detachment detecting means is

detecting the attachment of the seat belt; and

the tension varying means is provided at the retractor and the tension detecting means is provided at the buckle stay part, or the tension varying means is provided at the buckle stay part and the tension detecting means is provided at the lap anchor part, or the tension varying means and the tension detecting means are provided at the buckle stay part.

8. (New) A method of detecting an error in a seat belt device comprising a seat belt for constraining an occupant to a seat, tension varying means constructed and arranged for applying a tension to the seat belt, tension detecting means for detecting an actual tension on the seat belt; and failure detecting means for comparing the tension applied by the tension varying means to the actual tension detected by the tension detecting means, the method comprising;

applying a tension to the seat belt using the tension varying means;

measuring the actual tension on the seat belt using the tension detecting means;

using the failure detecting means to measure a difference between the tension applied by the tension varying means and the actual tension measured by the tension detecting means; and

if the difference is greater than a predetermined value determining that an error has occurred in at least one of the tension varying means or the tension detecting means, wherein the predetermined value is selected as a value larger than a tension loss from the tension varying means to the tension detecting means.

9. (New) A method according to claim 8, wherein the seatbelt further comprises an attachment/detachment means for detecting an attachment of the seat belt, the method further comprising determining whether the seat belt is attached using the attachment/detachment means and actuating the failure detecting means when the seat belt is determined to be attached by the attachment/detachment means.

10. (New) Method according to claim 8, further comprising lighting a warning lamp when an error in the tension varying means or tension detecting means is detected.

11. (New) Method according to claim 8, further comprising outputting a signal to an airbag control when an error in the tension varying means or tension detecting means is detected.